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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,393

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Staffan Gestrelus

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EXAMINER

HICKS, MICHAEL J

ART UNIT

PAPER NUMBER

2165

NOTIFICATION DATE

DELIVERY MODE

08/08/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/526,393	Applicant(s) GESTRELIUS ET AL.	
	Examiner Michael J. Hicks	Art Unit 2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-16 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 Pending.
Claims 17-20 Withdrawn.

Election/Restrictions

2. Claims 17-20 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/7/2008.

Claim Objections

3. Claims 4-16 and 21 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may not depend from a multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-16 and 21 have not been further treated on the merits. Examiner notes that Claims 5 and 10-14 depend from improper multiple dependent claims.
4. Claims 7, 9 and 15 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims 7, 9, and 15 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "said n-field data structure" in Line 4. There is insufficient antecedent basis for this limitation in the claim as is pertains to claim 1.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claim 1-3 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per Claims 1-3, claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting

a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

First, a claimed signal is clearly not a "process" under Sec. 101 because it is not a series of steps. The other three Sec. 101 classes of machine, compositions of matter and manufactures "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." 1 D. Chisum, Patents Sec. 1.02 (1994). The three product classes have traditionally required physical structure or material.

"The term machine includes every mechanical device or combination of mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." *Corning v. Burden*, 56 U.S. (15 How.) 252, 267 (1854). A modern definition of machine would no doubt include electronic devices which perform functions. Indeed, devices such as flip-flops and computers are referred to in computer science as sequential machines. A claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine.

A "composition of matter" "covers all compositions of two or more substances and includes all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." *Shell Development Co. v. Watson*, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C. 1957), *aff'd*, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958). A claimed signal is not matter, but a form of energy, and therefore is not a composition of matter.

The Supreme Court has read the term "manufacture" in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11, 8 USPQ 131, 133 (1931), which, in turn, quotes the Century Dictionary). Other courts have applied similar definitions. See *American Disappearing Bed Co. v. Arnaelsteen*, 182 F. 324, 325 (9th Cir. 1910), cert. denied, 220 U.S. 622 (1911). These definitions require physical substance, which a claimed signal does not have. Congress can be presumed to be aware of an administrative or judicial interpretation of a statute and to adopt that interpretation when it re-enacts a statute without change. *Lorillard v. Pons*, 434 U.S. 575, 580 (1978). Thus, Congress must be presumed to have been aware of the interpretation of manufacture in *American Fruit Growers* when it passed the 1952 Patent Act.

A manufacture is also defined as the residual class of product. 1 Chisum, Sec. 1.02[3] (citing W. Robinson, *The Law of Patents for Useful Inventions* 270 (1890)). A product is a tangible physical article or object, some form of matter, which a signal is not. That the other two product classes, machine and composition of matter, require physical matter is evidence that a manufacture was also intended to require physical matter. A signal, a form of energy, does not fall within either of the two definitions of manufacture. Thus, a signal does not fall within one of the four statutory classes of Sec. 101.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3 rejected under 35 U.S.C. 102(B) as being anticipated by Brealey et al. (U.S. Patent Number 6,044,217 and referred to hereinafter as Brealey).

As per Claim 1, Brealey discloses a computer program product having program code adapted to provide, upon execution, a database of objects and a database engine for managing said objects, characterized in that each object comprises metadata for describing the object and for defining a hierarchical structure of branches which constitutes said object and which includes relations to other objects (i.e. *"In accordance with these objects, the present invention provides a metadata container for common access tool data in an object oriented programming environment. The metadata container has a hierarchical structure that consists of simple constructed types containing subparts and encapsulated behaviour, components containing properties of a target language, and composed parts permitting partitioning for distribution. The present invention also provides a metadata store for common access tool data in a object oriented programming environment consisting of a single base class defining common behaviour for elements in the tool data, and separate abstract class hierarchies, inheriting from the single base class, to define name scope and containment for tool data."* The preceding text excerpt clearly indicates that objects exist which comprise metadata for describing the objects and metadata for defining a hierarchical relationship between the objects.) (Column 2, Lines 24-36), wherein an individual branch has: a metadata type, which is selected from a pre-determined and limited set of n different metadata

types and which represents one respective hierarchical level in said hierarchical structure (i.e. *"In accordance with these objects, the present invention provides a metadata container for common access tool data in an object oriented programming environment. The metadata container has a hierarchical structure that consists of simple constructed types containing subparts and encapsulated behaviour, components containing properties of a target language, and composed parts permitting partitioning for distribution."* The preceding text excerpt along with Figure 2 clearly indicates that there are a limited set of N-levels with each level being represented by metadata in the objects of that level.) (Column 2, Lines 24-36); a metadata value (i.e. *"In accordance with these objects, the present invention provides a metadata container for common access tool data in an object oriented programming environment. The metadata container has a hierarchical structure that consists of simple constructed types containing subparts and encapsulated behaviour, components containing properties of a target language, and composed parts permitting partitioning for distribution."* The preceding text excerpt along with Figure 2 clearly indicates that there are a limited set of N-levels with each level being represented by metadata in the objects of that level.) (Column 2, Lines 24-36); and an arbitrary number of other branches, of any hierarchical level strictly subordinate to the hierarchical level of said individual branch, connected to said individual branch as children thereof, said arbitrary number including zero branches (i.e. *Figure 2 indicates that each object in the hierarchy may have an arbitrary number of child branches, including 0.*).

As per Claim 2, Brealey discloses each object is stored in said database in the form of an n-field data structure for each particular branch that does not have any children (i.e. *"The layering approach to a metadata store is schematically illustrated in FIG. 1. The semantics of a part 1 are layered in a spectrum in the data model from parats used by general use tools to parts used by increasingly specialised tools. At the general end of the spectrum, Generalised Parts 2*

are base parts corresponding to the semantics of a constructed type within the target language. The list of generalised parts include subparts and encapsulated behaviour such as methods and inheritance.

Typically, these correspond to a class definition for object oriented languages such as C++ and

JAVA.TM., or to some form of a structure, such as in COBOL (JAVA is trademark of Sun Microsystems, Inc.)." The preceding text excerpt along with figure 2 clearly indicates that each object, including child

objects, is represented in the database to, at least, contain a field for each level of inheritance within the objects (e.g. each preceding level of the hierarchy for which an ancestor object exists. Examiner notes that these entries will be stored in a database as a table of entries to track the objects.) (Column 3, Lines 56-57), and wherein each field of the n-field data structure represents a respective

branch that precedes said particular branch as its ancestor (i.e. *"The layering approach to a*

metadata store is schematically illustrated in FIG. 1. The semantics of a part 1 are layered in a spectrum in the data model from parats used by general use tools to parts used by increasingly specialised tools.

At the general end of the spectrum, Generalised Parts 2 are base parts corresponding to the semantics of a constructed type within the target language. The list of generalised parts include subparts and

encapsulated behaviour such as methods and inheritance. Typically, these correspond to a class

definition for object oriented languages such as C++ and JAVA.TM., or to some form of a structure, such as in COBOL (JAVA is trademark of Sun Microsystems, Inc.)." The preceding text excerpt along with

figure 2 clearly indicates that each object, including child objects, is represented in the database to, at

least, contain a field for each level of inheritance within the objects (e.g. each preceding level of the

hierarchy for which an ancestor object exists. Examiner notes that these entries will be stored in a

database as a table of entries to track the objects.) (Column 3, Lines 56-57).

As per Claim 3, Brealey discloses said database comprises a branch table

having columns that correspond to the n different metadata types (i.e. *"The layering*

approach to a metadata store is schematically illustrated in FIG. 1. The semantics of a part 1 are layered

in a spectrum in the data model from parats used by general use tools to parts used by increasingly

specialised tools. At the general end of the spectrum, Generalised Parts 2 are base parts corresponding to the semantics of a constructed type within the target language. The list of generalised parts include subparts and encapsulated behaviour such as methods and inheritance. Typically, these correspond to a class definition for object oriented languages such as C++ and JAVA.TM., or to some form of a structure, such as in COBOL (JAVA is trademark of Sun Microsystems, Inc.)." The preceding text excerpt along with figure 2 clearly indicates that each object, including child objects, is represented in the database to, at least, contain a field for each level of inheritance within the objects (e.g. each preceding level of the hierarchy for which an ancestor object exists. Examiner notes that these entries will be stored in a database as a table of entries to track the objects.) (Column 3, Lines 56-57) and wherein said n-field data structure is stored as a row in said branch table (i.e. *"The layering approach to a metadata store is schematically illustrated in FIG. 1. The semantics of a part 1 are layered in a spectrum in the data model from parats used by general use tools to parts used by increasingly specialised tools. At the general end of the spectrum, Generalised Parts 2 are base parts corresponding to the semantics of a constructed type within the target language. The list of generalised parts include subparts and encapsulated behaviour such as methods and inheritance. Typically, these correspond to a class definition for object oriented languages such as C++ and JAVA.TM., or to some form of a structure, such as in COBOL (JAVA is trademark of Sun Microsystems, Inc.)."* The preceding text excerpt along with figure 2 clearly indicates that each object, including child objects, is represented in the database to, at least, contain a field for each level of inheritance within the objects (e.g. each preceding level of the hierarchy for which an ancestor object exists. Examiner notes that these entries will be stored in a database as a table of entries to track the objects.) (Column 3, Lines 56-57).

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Hicks whose telephone number is (571) 272-2670. The examiner can normally be reached on Monday - Friday 9:00a - 5:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chace can be reached on (571) 272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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